Amendments to the Claims begin on page 3 of this paper.

Remarks/Arguments begin on page 7 of this paper.

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in this application. Please amend the above-identified application as follows:

Listing of Claims:

1. (previously cancelled) A complex comprising:
   a. a target-binding moiety, which in said complex is capable of specifically binding a target;
   b. a cavity-forming moiety; and
   c. a pharmacological compound,

wherein:

said pharmacological compound is present in the cavities of said cavity-forming moiety and is bound non-covalently thereto; and

said target-binding moiety is bound to said cavity-forming moiety.

2. (previously cancelled) The complex according to claim 1, wherein said cavity-forming moiety is a recombinant protein.

3. (previously cancelled) The complex according to claim 1, wherein said target-binding moiety is a recombinant polypeptide.

4. (previously cancelled) The complex according to any one of claims 1 to 3, wherein said cavity-forming moiety and said target binding moiety are part of a single polypeptide.

5. (previously cancelled) The complex according to any one of claims 1 to 4, wherein said target-binding moiety comprises a ligand for a cell surface receptor.

6. (previously cancelled) The complex according to any one of claims 1 to 4, wherein said target-binding moiety comprises an antigen-binding fragment of an antibody.

7. (previously cancelled) The complex according to claim 6, wherein said antigen-binding fragment binds a cell surface protein.

8. (previously cancelled) The complex according to any one of claims 1-7, wherein said cavity-forming moiety and said target-binding moiety are each independently a protein selected from the group consisting of the NGF-family of neurotrophic factors, their chimeras, IL-1b, IL-2, IL-3 and other interleukins, GM-CSF, EGF, FGF, barnase, T4 lysozyme, TGFb and IgG.

9. (previously cancelled) The complex according to any one of claims 1-8, wherein said pharmacological compound is bound to said complex with a dissociation constant of less than 1 mM under physiological conditions.

10. (previously cancelled) The complex according to claim 9, wherein said pharmacological compound is bound to said complex with a dissociation constant of less than 0.1 mM under physiological conditions.

11. (previously cancelled) The complex according to any one of claims 1-10, wherein said pharmacological compound has a size of less than 800 $Å^3$.

12. (previously cancelled) The complex according to claim 11, wherein said pharmacological compound has a size of less than 400 $Å^3$.

13. (previously cancelled) The complex according to any one of claims 1-10, wherein said pharmacological compound is selected from a cytotoxic compound, an antiviral compound, an anti-inflammatory compound, an immunosuppressant, a chemotherapeutic agent, a radioisotope, or an ion.

14. (previously cancelled) The complex according to claim 13, wherein said pharmacological compound is selected from Ca^{++}, Zn^{++}, ^{99m}Tc, ^{67}Cu, ^{90}Y, urea, phenol, salicylic acid derivatives, cis-platinum, etoposide, vincristine, lysodren, ifosfamide, myleran, thiotepa and other nitrogen mustard derivatives, hydroxyurea, carmustine, other nitrosourea derivatives, antibiotics, AZT, 3TC, Cidofovir, or an HIV protease inhibitor.

15. (previously cancelled) A pharmaceutical composition comprising

a. a complex according to any one of claims 1 to 14 in an amount sufficient to deliver a therapeutic amount of the pharmacological compound present in said complex to a desired target in a patient; and

b. a pharmaceutically acceptable carrier.

16. (currently amended) A method of delivering a pharmacological compound to a target in a patient, comprising the step of administering to said patient a pharmaceutical composition comprising a complex comprising

a. a target-binding moiety, which in said complex is capable of specifically binding a target;

b. a cavity-forming moiety; and

c. a pharmacological compound,

wherein:

said pharmacological compound is present in the cavities of said cavity-forming moiety and is bound non-covalently thereto;

said target-binding moiety is bound to said cavity-forming moiety in an amount sufficient to deliver a therapeutic amount of the pharmacological compound present in said complex to a desired target in a patient; and

said pharmaceutical composition also contains a pharmaceutically acceptable carrier.

17. (previously presented) The method according to claim 16, wherein said target is selected from a molecule, a cell, a tissue, an organ, a virus, a bacteria, a yeast, a fungus, or other microorganism or another surface that is capable of binding specifically to said complex.

18. (currently amended) The method according to claim 16, wherein said target comprises a protein that binds to said carrier.

19. (previously presented) The method according to claim 18, wherein said protein is a cell surface protein.

20. (previously presented) The method according to claim 18 or 19, wherein said protein is a receptor.

21. (previously presented) The method according to claim 19, wherein said protein is selected from a cytokine receptor, a chemokine receptor, a neurotrophin receptor or a cell surface antigen.

22. (previously presented) The method according to claim 21, wherein said protein is selected from trkA, trkB, trkC, p75, IL-1R, IL-2R, IL-3R, GM-CSFR, EGFR, FGFR, CD33 and CD4.

23. (previously presented) A method of purifying a pharmacological compound away from unwanted chiral forms of said compound and other contaminants in a mixture comprising the steps of:

a. combining said mixture with a target-binding moiety and a cavity-forming moiety under conditions wherein a complex is formed, said complex containing said pharmacological compound occluded within a cavity of said cavity-forming moiety, and wherein said cavity-forming moiety is not capable of occluding unwanted chiral forms of said compound and other contaminants in said mixture under said conditions;

b. separating said complex from said mixture; and

c. releasing said pharmacological compound from said complex.

24. (currently amended) A method for producing a complex comprising:

a. a target-binding moiety, which in said complex is capable of specifically binding a target;

b. a cavity-forming moiety; and

c. a pharmacological compound,

wherein:

said pharmacological compound is present in the cavities of said cavity-forming moiety and is bound non-covalently thereto; and

said target-binding moiety is bound to said cavity-forming moiety, comprising the steps of:

i. dispersing a pharmacological compound in a pharmaceutically acceptable solution suitable for therapeutic administration; and

ii. adding a cavity-forming moiety and a target-binding moiety to said pharmacological compound under conditions which occlude said compound in a cavity of said cavity-forming moiety and form the desired complex.

25. (previously presented) The method of claim 24, wherein said conditions are heating for less than 30 minutes at a temperature of between 40°C and 90°C followed by cooling to a temperature of between 4°C and 25°C.

26. (previously presented) The method of claim 24, wherein said conditions are exposure to pH 1 to 5 or 9 to 14 for less than 60 minutes, followed by return to a physiological pH.

27. (previously presented) The method of claim 24, wherein said conditions are the presence of an at least 10-fold excess of said pharmacological compound, followed by removal of any of said compound that is not occluded.

28. (previously presented) The method of claim 24, wherein said conditions are exposure to a denaturant selected from urea or guanidine, followed by removal of said denaturant.